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(21) Application No 9020688.9

(22) Date of filing 22.09.1990

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**A47B 95/02**

(52) UK CL (Edition K)

**A4L LOD LU12**

(56) Documents cited

GB 0865776 A      US 4787216 A

**(58) Field of search**

UK CL (Edition K) A4L LDD

INT CL: A47B

**Online databases: WPI**

(54) Knob

(57) A knob (21) comprises preformed inner and outer components (2, 1) snap-fitted together. The inner component (2) can have a flange (10) which engages in a slot (5) in the outer component (1) when the two components are snap-fitted together. Also, inner components (2) can have different internal bore configurations (14) and can be interchangeable, so that the knob (21) can fit different configurations of spindle upon which the knobs are mountable. The inner components (2) may be of different colours for identification purposes and may be injection moulded from a rigid plastics material, in which latter case, the outer component (1) may be injection moulded from a resilient plastics, preferably thermoplastics, material.

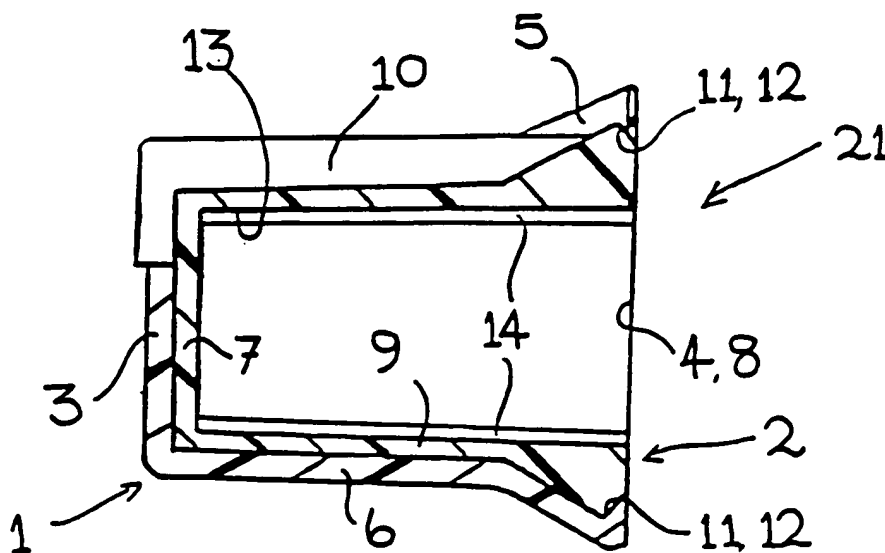


FIG. 2

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1990.

UD 2 233 330 A

KNOBS

DESCRIPTION

5           This invention relates to knobs.

          In particular, the invention is related to knobs  
for electrical and electronic equipment, such as,  
control panels for audio recording equipment. Also,  
10       the invention is directed to an associated method  
of manufacturing knobs.

          In the past, knobs have either been manufactured,  
for example, by injection moulding, as unitary articles  
15       or by subsequently forming, usually by injection mould-  
ing, an outer component around a preformed inner compo-  
nent thereof.

          Such previously-known methods are comparatively  
20       expensive, particularly the latter mentioned above,  
in that the corresponding injection moulds have to  
be made to accommodate the preformed inner components  
around which the subsequently formed outer component  
is moulded.

25           It is an object of the present invention to pro-  
vide a knob and an associated method for manufacturing  
a knob, which overcomes, or at least substantially  
reduces, the disadvantages associated with previous  
30       knobs and their methods of manufacture.

          Accordingly, one aspect of the invention provides  
a knob comprising a preformed inner component and  
a preformed outer component which have been snap-  
35       fitted together.

The component 1 constitutes a preformed outer component of the knob 21, which has been injection moulded from a resilient, thermoplastics material, with a generally closed end 3, an open end 4 and a slot 5 extending longitudinally in the side wall 6 of the component 1.

The component 2, as shown in Figure 1B, constitutes the inner component of the knob 21, with a closed end 7 and open end 8. A flange 10 protrudes radially outwardly of the generally cylindrical side wall 9 of the component 2.

The inner knob component 2 has, adjacent its open end 8, an outer annular ridge 11 which, when the inner component 2 is received within the outer knob component 1, is arranged to snap-fit into a correspondingly-shaped annular groove 12 adjacent the mouth 4 of the outer component 1.

When the two knob components 1, 2 are snap-fitted together, the flange 10 of the latter is located within the slot 5 of the former, as shown in Figure 2. Also, the inner component 2 may be manufactured in different colours, so that when the knob 21 is assembled, the flange 10 is colour coded and visible for identification purposes.

Further, the bore 13 of the inner component 2 is provided with axially extending corrugations 14 which are arranged to engage corresponding splines (not shown) of a spindle (also not shown) upon which the knob 21 is mountable, to provide, say, a friction fit therebetween. Indeed, the inner component 2 may also be manufactured with different configurations

CLAIMS

1. A knob comprising a preformed inner component and a preformed outer component which have been snap-fitted together.  
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2. A knob according to claim 1, wherein the preformed outer component has a generally closed end and an open end, with a slot extending longitudinally in the side wall thereof and with an annular groove adjacent the open end thereof, and wherein the preformed inner component has a closed end and an open end, with a flange protruding radially outwardly of the generally cylindrical side wall thereof and with an outer annular ridge adjacent the open end thereof, the inner component having been received within the outer component, the outer annular ridge of the inner component having been snap-fitted into the annular groove of the outer component and the flange of the inner component being located within the longitudinally-extending slot of the outer component.  
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3. A knob accordingly to claim 1 or 2, wherein the inner component has a bore between its ends provided with axially extending corrugations arranged to engage corresponding splines of a spindle upon which the knob is mountable to provide a friction fit therebetween.  
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4. A knob according to claim 3, wherein inner components are manufacturable with different bore configurations and are interchangeable with the outer component, for fitting various configurations of knob spindle.  
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5. A knob according to any preceding claim, wherein  
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such that, on assembly, when the inner component is received within the outer component and the annular ridge of the inner component is snap-fitted into the annular groove of the outer component, the flange of the inner component is located within the longitudinally-extending slot of the outer component.

11. A method according to claim 8, 9 or 10, wherein the inner component is provided with a bore with axially extending corrugations arranged to engage corresponding splines of a spindle upon which the knob is mountable to provide a friction fit therebetween.

12. A method according to claim 11, wherein inner components are manufactured with different bore configurations and are interchangeable for fitting various configurations of knob spindle.

13. A method according to claim 10 or to claim 11 or 12 when dependent thereupon, wherein inner components are manufactured in different colours, so that the flange is colour coded for identification purposes.

14. A method of manufacturing a knob substantially as hereinbefore described.

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